

Performance Strategies Across Team and Individual Sports of Negeri Sembilan Athletes

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ABSTRACT

The objective of this study was to determine the differences in the use of performance strategies of Negeri Sembilan Sukan Malaysia (SUKMA) 2014 athletes during practice and competition. The participants consisted of 142 athletes (49 team sports, 93 individual sports). The participants completed the Test of Performance Strategies (TOPS) questionnaire during the final camp before competing in the competition. Results showed that there were significant differences in performance strategies used by individual and team sport athletes during practice and competition conditions. Individual athletes were better in using performance strategies during practice (i.e., goal setting, relaxation and self-talk) and competition condition (i.e., goal setting and self-talk) compared to team sport athletes. The idea of using the psychological skills training could be taken into consideration for coaches and sport psychologist in order to help athletes improve their performance.

Keywords: Competition, individual sport, practice, performance strategies, team sport

INTRODUCTION

Successful and unsuccessful athletes could be differentiated by their psychological skills (Ismail & Ahmad, 2014). Furthermore, the competitive nature of sport and the ability to perform under stressful condition

give different experience emotionally to the athlete's sport performance. Each sport has different types of psychological pressure. For example, in golf, the pressure comes from the distance to make putt (Ismail, 2014). Previous researchers found, in team sports like rugby, the players' level of anxiety increases before the first game, but there is no pressure during the second game (Ismail & Amer, 2016). These experiences would bring about specific psychological problems that need special attention by the coaches and sport psychologists. Additionally,

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in individual sports like golf, athletics, swimming and archery it all depends on the athlete's abilities. But, as for athletes in team sports like football and rugby, they depend on the colleagues' performance or team cohesion compared to individual sports (Heuze et al., 2006).

Performance strategies are one of the factors that may lead to enhanced performance towards individual and team athletes. Although these athletes have a lot of experience in big competitions, they could not achieve better performance if they are only fit physically. Performance strategies are based on different type of sports of play (Ismail & Ahmad, 2014). Therefore, it is difficult for coaches and sport psychologist to build effective performance strategies for individual athletes and teams. However, athletes need to work on mental training and psychological skills in order to obtain good achievement (Ismail & Ahmad, 2014). Kremer and Moran (2008) found that the reason why athletes got uptight before competition could be related to the pressure of being observed. However, athletes who suffer severe anxiety and do not know how to manage it can cause performance degradation (Sabato et al., 2016). Past researchers also found that professional athletes have a higher ability in psychological states like self-confidence, concentration and skills to use goal setting and imagery that can regulate arousal effectively other than high responsibility with their own training program (Gould et al., 2002; Harwood et al., 2004). With regard to gender differences, Harwood et al.

(2004) clearly mentioned that male athletes used more emotion based strategies like relaxation compared to female's athletes.

Previous researchers suggested using imagery, self-talk, and relaxation during practice to help athletes during competition (Frey et al., 2003). The more athletes use mental skill at practice, the more successful they perceive themselves to be, not only at practice but also in competition. For instance, the level of anxiety in athletes is reduced after using certain psychological strategies (Fletcher & Hanton, 2001). The study concluded that those athletes who used strategies like self-talk, relaxation and imagery had helped in controlling their cognitive anxiety, somatic anxiety and increase self-confidence compared to those who did not use it.

Katsikas et al. (2009) highlighted that an individual athlete had higher anxiety control and confidence than team sports athletes. It is because the different types of strategies are involved in team sports compared to individual sports (Polson, 2013). However, Sadeghi et al. (2010) revealed that imagery, self-talk, goal-setting and relaxation were found to be the most needed psychological strategies in training and competition conditions. In fact, most athletes strongly agree with the use of imagery and believe it can increase self-confidence and motivation (Halim et al., 2016, Ismail, 2014; Ismail, 2015; Ismail, 2016a; Yahya et al., 2016). For example, goal setting may be used before a competition and may have an effect on increasing motivation, attention and self-confidence (Sadeghi et al., 2010).

Previous study also argued that goal setting not only increased playing skill, techniques, performance but also increased focus and concentration that could be necessary for winning the competition (Burton & Radeke, 2008). In literature, however, there is still a lack of information regarding the level of performance strategies used by the athletes in Malaysia. Therefore, the objective of this study is to determine the performance strategies used by individual sports and team sports of Negeri Sembilan athletes.

METHODS

Sample and Participant Selection

A hundred and forty two athletes purposively recruited from Negeri Sembilan Sukan Malaysia (SUKMA) contingent 2014 participated in this study. Forty nine athletes were selected from team sports (e.g., football, sepak takraw and hockey), and ninety three athletes from individual sports (e.g., kickboxing, silat, badminton, squash, archery, taekwondo, cycling, weightlifting, petanque, shooting, karate, bowling, tennis, diving, athletic, golf and lawn bowls).

Assessments and Measures

The participants completed the Test of Performance Strategies (TOPS) questionnaire during the competition's final camp before the Sukan Malaysia (SUKMA) 2014 competition. TOPS is a 64-item self-report instrument, designed by Thomas et al. (1999) to measure the psychological skills and strategies used by athletes in competition and during practice.

It consists of two scales; competition and practice. Each scale consists of another eight subscales. The 8 competition subscales are: self-talk, emotional control, automaticity, goal setting, imagery, positive thinking, activation, and relaxation. The practice subscales are the same except positive thinking which is replaced by attentional control (Thomas et al., 1999). For this study, the Cronbach alpha coefficient of Test of Performance Strategies (TOPS) questionnaire was 0.86.

Procedure

The present study was conducted during the final camp or a week before the competition at the time of data collection. After a briefing given by the main researcher and also as a team psychologist, athletes were asked to read the questionnaire carefully and complete all sections. They took approximately 15 minutes to complete the survey and they were informed that their participation were on voluntary basis.

RESULTS AND DISCUSSION

The preliminary assumptions were conducted and the data were normally distributed. Descriptive statistics for performance strategies during practice and competition are presented in Table 1 and Table 2. An Independent t-test result in Table 1 shows significant differences in relaxation strategies scores during practice condition for team athletes ($M = 14.45$, $SD = 2.78$) and individual athletes ($M = 15.33$, $SD = 2.32$; $t(140) = -2.01$, $p < 0.05$, two-tailed). The magnitude of the differences in

the means (means difference = -0.884, 95% *CI*: -1.75 to -0.016) is small (eta squared = 0.02). The self-talk strategies scores for team athletes ($M = 15.90$, $SD = 2.77$) and individual athletes ($M = 16.96$, $SD = 2.31$; $t(140) = -2.43$, $p < 0.05$, two-tailed). The magnitude of the differences in the means (means difference = -1.059, 95% *CI*: -1.92 to -0.196) is small (eta squared = 0.04). Additionally, the goal setting strategies scores for team athletes ($M = 13.53$, $SD = 2.01$) and individual athletes ($M = 14.42$, $SD = 2.02$; $t(140) = -2.49$, $p < 0.05$, two-tailed). The magnitude of the differences in the means (means difference = -0.889, 95% *CI*: -1.59 to -0.185) is small (eta squared = 0.04). It is clearly shown that individual athletes were using problem focused strategies such

as goal setting and self-talk and emotional focused strategies like relaxation compared to team athletes during practice.

During competition condition, the Independent t-test result in Table 2 shows significance difference in self-talk and goal setting strategies. The self-talk strategies scores for team athletes ($M = 15.39$, $SD = 3.19$) and individual athletes ($M = 16.86$, $SD = 2.08$; $t(140) = -3.31$, $p < 0.05$, two-tailed). The magnitude of the differences in the means (means difference = -1.47, 95% *CI*: -2.35 to -0.593) is moderate (eta squared = 0.07). Meanwhile, the goal setting strategies for team athletes ($M = 11.57$, $SD = 1.88$) and individual athletes ($M = 12.63$, $SD = 1.76$; $t(140) = -3.35$, $p < 0.05$, two-tailed). The magnitude of the differences in

Table 1
Independent t-test for differences between individual and team sport athletes for performance strategies during practice condition

Variable	Sport	N	Mean	SD	<i>t</i>	df	<i>p</i>	Mean diff	Std. error diff																																																																																												
Activation	Team	49	14.06	2.14	0.61	140	0.55	0.23	0.38																																																																																												
	Individual	93	13.83	2.20						Emotion	Team	49	9.65	2.21	-1.47	140	0.14	-0.58	0.39	Individual	93	10.24	2.26	Automaticity	Team	49	15.43	2.35	-0.92	140	0.36	-0.41	0.45	Individual	93	15.84	2.61	Relaxation	Team	49	14.45	2.78	-2.01	140	0.04*	-0.88	0.44	Individual	93	15.33	2.32	Attention	Team	49	13.27	1.51	-0.77	140	0.44	-0.23	0.29	Individual	93	13.49	1.77	Imagery	Team	49	14.53	2.55	-1.78	140	0.07	-0.79	0.45	Individual	93	15.32	2.51	Self - talk	Team	49	15.90	2.76	-2.43	140	0.01*	-1.06	0.44	Individual	93	16.96	2.31	Goal setting	Team	49	13.53	2.01	-2.49	140	0.01*
Emotion	Team	49	9.65	2.21	-1.47	140	0.14	-0.58	0.39																																																																																												
	Individual	93	10.24	2.26						Automaticity	Team	49	15.43	2.35	-0.92	140	0.36	-0.41	0.45	Individual	93	15.84	2.61	Relaxation	Team	49	14.45	2.78	-2.01	140	0.04*	-0.88	0.44	Individual	93	15.33	2.32	Attention	Team	49	13.27	1.51	-0.77	140	0.44	-0.23	0.29	Individual	93	13.49	1.77	Imagery	Team	49	14.53	2.55	-1.78	140	0.07	-0.79	0.45	Individual	93	15.32	2.51	Self - talk	Team	49	15.90	2.76	-2.43	140	0.01*	-1.06	0.44	Individual	93	16.96	2.31	Goal setting	Team	49	13.53	2.01	-2.49	140	0.01*	-0.89	0.36	Individual	93	14.42	2.02								
Automaticity	Team	49	15.43	2.35	-0.92	140	0.36	-0.41	0.45																																																																																												
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	Individual	93	15.33	2.32						Attention	Team	49	13.27	1.51	-0.77	140	0.44	-0.23	0.29	Individual	93	13.49	1.77	Imagery	Team	49	14.53	2.55	-1.78	140	0.07	-0.79	0.45	Individual	93	15.32	2.51	Self - talk	Team	49	15.90	2.76	-2.43	140	0.01*	-1.06	0.44	Individual	93	16.96	2.31	Goal setting	Team	49	13.53	2.01	-2.49	140	0.01*	-0.89	0.36	Individual	93	14.42	2.02																																				
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	Individual	93	13.49	1.77						Imagery	Team	49	14.53	2.55	-1.78	140	0.07	-0.79	0.45	Individual	93	15.32	2.51	Self - talk	Team	49	15.90	2.76	-2.43	140	0.01*	-1.06	0.44	Individual	93	16.96	2.31	Goal setting	Team	49	13.53	2.01	-2.49	140	0.01*	-0.89	0.36	Individual	93	14.42	2.02																																																		
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	Individual	93	14.42	2.02																																																																																																	

Note. * $p < .05$

the means (means difference = -1.06, 95% CI: -1.69 to -0.44) is moderate (eta squared = 0.07). The findings of the study showed that those individual athletes significantly used more strategies than the team athletes.

This is supported by the previous study which stated that the nature of sports caused conditions that individual athletes could independently train and use all the skills (Kremer & Moran, 2008).

Table 2
Independent t-test for differences between individual and team sport athletes for performance strategies during competition condition

Variable	Sport	N	Mean	SD	<i>t</i>	df	<i>p</i>	Mean diff	Std. error diff
Activation	Team	49	15.47	2.74	-0.46	140	0.65	-0.21	0.46
	Individual	93	15.68	2.50					
Emotion	Team	49	12.49	3.54	0.39	140	0.70	0.22	0.57
	Individual	93	12.27	3.09					
Automaticity	Team	49	14.33	3.56	0.92	140	0.36	0.57	0.62
	Individual	93	13.75	3.49					
Relaxation	Team	49	11.16	2.28	0.39	140	0.69	0.15	0.39
	Individual	93	11.01	2.19					
Negative talk	Team	49	11.33	2.77	0.36	140	0.72	0.17	0.46
	Individual	93	11.16	2.48					
Imagery	Team	49	13.27	2.29	-1.45	140	0.15	-0.61	0.42
	Individual	93	13.87	2.39					
Self - talk	Team	49	15.39	3.19	-3.31	140	0.01*	-1.47	0.45
	Individual	93	16.86	2.08					
Goal setting	Team	49	11.57	1.88	-3.35	140	0.01*	-1.06	0.32
	Individual	93	12.63	1.76					

Note. **p* < .05

CONCLUSION

The objective of this study was to determine the performance strategies of individual and team sports. From the present study it was concluded that the individual athletes used more performance strategies during practice and competition condition compared to team sport athletes. It is clearly shown that individual athletes were trained independently because they were using problem focused strategies such as

goal setting and self-talk. Additionally, the individual athletes were also using emotional focused strategies like relaxation during practice condition. As Kremer and Moran (2008) concluded that the nature of sports caused conditions that individual athlete could use all the skills and train independently. This is contrary to a previous study when problem solving referred to strategies used to deal with stress through behaviors such as goal setting and problem

setting which was used more by the team athletes (Dachen, 2012). However, Polson (2013) evaluated the process of goals from various sports, and concluded that athletes in individual sport set more process goals than those in team sports.

A possible explanation of this difference could be that goal setting used before a competition and may have an effect on increasing motivation, attention and self-confidence (Sadeghi et al., 2010). The researcher suggested that athletes from different sports may judge goal setting with a different way, relatively to the demands of their own sport. Previous researchers have demonstrated that effective team functioning and the achievement of group psychological outcomes are associated with success (i.e., cohesion, collective efficacy), other than individual and inter-individual sub factors like self-regulation skills, role clarity, communication skills, leadership style, peer acceptance from each athlete (Kleinert et al., 2012). In fact, team athletes are very enthusiastic to have a chance to participate in games and competitions so they should be in competitions with their teammates or their opponents in other teams, and probably further research is needed (Samad et al., 2015).

In conclusion, the results from the current study supported the hypothesis that those individual athletes significantly used more strategies than the team athletes. Therefore, the coaches and sport psychologist must play a fundamental role in the Group Dynamics in Sports. For

example, in awareness building, assessment, education, strategy development, and counseling at the level of the individual member, dyadic relationships, and the group as a whole (Kleinert et al., 2012). The limitations found in this study are whether the athletes have any experience in mental training before the competition. In fact, the findings of the present study could help coaches together with sport psychologist to design more effective psychological skills strategies such as imagery training rather than only focusing on technical and tactical of the game individually (Ismail, 2016b ; Yahya et al., 2016). Further research is needed to identify the performance strategies use in bigger population and the different gender.

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